

Backrest and Method for Making Backrest

Field of Invention

The present invention relates to a backrest and, more particularly, to a method for making such a backrest.

Background of Invention

A typical chair for use in an office includes a seat and a backrest. The seat and the backrest are both made from foam material so as to provide a soft feeling to a person sitting in the chair. However, the backrest made of foam material is not good for dissipating heat produced by the person. Moreover, the backrest made of foam material is heavy and bulky and, hence, not economic regarding transportation.

The present invention is therefore intended to obviate or at least alleviate the problems encountered in prior art.

Summary of Invention

It is an objective of the present invention to provide a backrest with good dissipation of heat produced by a person's back laid against it.

It is another objective of the present invention to provide a backrest that is light in weight and compact in size.

According to the present invention, a backrest includes a frame, a web and a ring. The frame includes a margin and two rims extending on a

1 side of the margin and a gap defined between the rims. The web is
2 spread on the side of the frame. The ring is put on the web and fit in the
3 annular groove so that the web is tightly spread on the frame.

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5 Other objects, advantages and novel features of the invention will become
6 more apparent from the following detailed description in conjunction
7 with the attached drawings.

8 9 **Brief Description of Drawings**

10 The present invention will be described via detailed illustration of
11 embodiments referring to the drawings.

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13 Figure 1 is a flowchart of a method for making a backrest according to
14 the preferred embodiment of the present invention.

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16 Figure 2 is an exploded view of a backrest according to the preferred
17 embodiment of the present invention.

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19 Figure 3 is a cross-sectional view of the backrest of Figure 2.

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21 Figures 4-9 are perspective views of a mold assembly in various steps of
22 the method of Figure 1 for making the backrest of Figure 2.

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24 Figure 10 is a perspective view of the backrest of Figure 1.

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26 Figure 11 is a perspective view of the backrest of Figure 10 used in a

1 chair.

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3 **Detailed Description of Embodiments**

4 In accordance with the preferred embodiment of the present invention, a
5 backrest shown in Figures 2, 3, 10 and 11 is made in a method shown in
6 Figures 1 and 4-9.

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8 Referring to Figure 2, the backrest includes a frame 10, a web 20, a ring
9 30, a cushion 40 and a cover 50. The frame 10 includes a margin 11 and
10 two rims 12 extending on a front side of the margin 11. A gap 13 is
11 defined between the rims 12.

12

13 Referring to Figure 3, the web 20 is put on a front side of the frame 10.
14 The ring 30 is put on a front side of the web 20. The ring 30 and an
15 annular portion of the web 20 are fit into the annular groove 13. Thus,
16 the web 20 is tightly spread on the frame 10, i.e., tension is produced in
17 the web 20. The cushion 40 is put in the frame 10. The cushion 40 is
18 compressed between the margin 11 and the web 20. Thus, the web 20 is
19 more tightly spread on the frame 10, i.e., the tension in the web 20 is
20 increased. The cover 50 is installed around the frame 10.

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22 Referring to Figures 1 and 4, at step S10, a mold assembly is provided.
23 The mold assembly includes a lower mold 60, a middle mold 62 and an
24 upper mold 70. The lower mold 60 defines a cavity 61 in an upper side.
25 The profile of the cavity 61 is compliant with that of the backrest. The
26 profile of the middle mold 62 is compliant with that of the cavity 61.

1 The upper mold 70 defines a cavity 71 in a lower side. The profile of
2 the cavity 71 is compliant with that of the middle mold 62.

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4 Referring to Figures 1 and 5, at step S15, the frame 10 is put in the cavity
5 61. The rims 12 face up.

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7 Referring to Figures 1 and 6, at step S20, the middle mold 62 is lowered
8 against the margin 11. Thus, the frame 10 is held in position. The rims
9 12 are exposed.

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11 Referring to Figures 1 and 7, at step S25, the web 20 is laid on the middle
12 mold 62. The web 20 covers the rims 12.

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14 Referring to Figures 1 and 8, at step S30, the ring 30 is put on the web 20.
15 The ring 30 and an annular portion of the web 20 are forced into the
16 annular groove 13. Thus, the web 20 is tightly spread on the frame 10.

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18 Referring to Figures 1 and 9, at step S35, the upper mold 70 is lowered
19 against the ring 30. High frequency is exerted on the frame 10, the web
20 20 and the ring 30. Thus, the frame 10, the web 20 and the ring 30 are
21 heated and therefore partly melted. The frame 10, the web 20 and the
22 ring 30 adhere to one another when they cool down.

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24 Referring to Figure 1, at step S40, the upper mold 70 is lifted from the
25 ring 30 and returned to its original position. The middle mold 62 is
26 lifted from the lower mold 60 and returned to its original position.

1 At step S45, the frame 10, the web 20 and the ring 30, as a whole, are
2 moved from the middle mold 62.

3

4 At step S50, the cushion 40 is put in the frame 10. The cushion 40 is
5 compressed between the margin 11 and the web 20. Thus, the web 20 is
6 more tightly spread on the frame 10.

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8 At step S55, the cover 50 is installed around the frame 10.

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10 At step S60, the backrest is finished.

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12 The present invention has been described via detailed illustration of some
13 embodiments. Those skilled in the art can derive variations from the
14 embodiments without departing from the scope of the present invention.
15 Therefore, the embodiments shall not limit the scope of the present
16 invention defined in the claims.

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